TOP SECRET

PRIORITY

OUT57602

T O P S E C R E T 242323Z

1966 JAN 25 00 05Z

25X1

1

SUBJ: SUBJECTIVE ANALYSIS OF THE THERMAL CHANGES IN THE STEREO MIRROR OF MISSION 4018.

ATTEN:

25X1

1. THE FOLLOWING NOTES WERE COMPILED IN AN EFFORT TO DETERMINE THE INFLUENCE OF TEMP CHANGES IN THE STEREO MIRROR ON MSN 4018. THE ANALYSIS WAS CONDUCTED ON A SUBJECTIVE BASIS AND IS THEREFORE BIASED BY OTHER INFLUENCES, SUCH AS ATMOSPHERIC ATTENUATION, OBLIQUITY, CAMERA ANOMALIES AND SYSTEM LIMITATIONS. IN THE ANALYSIS, THE NBRS 1 THRU 7 WERE USED TO DESCRIBE THE COMPARATIVE IMAGE QUALITY - NUMBER 1 REPRESENTING THE BEST QUALITY AND NUMBER 7 THE POOREST.

25 JAN 1966

DISTRIBUTION 7

Cy No.	Office	Action
1	File	
2	OS	
	ADMIN	
	SEC BR	
	P & DS	
	OSD	
	IPD	
	FD	
	PSD	
	PSD-ICB	
345	TID	✓
	IAD	
	PAG	
	DIAXX-4	
	SPAD	
	NSA-LO	
	DIA-AP	

1

Advance copy Sanitized

2. THE FOLLOWING LIST INCLUDES: PASS, FRAME, APPROX CLOUD COVER PERCENTAGE, THE APPARENT INFLUENCE OF ATMOSPHERIC ATTENUATION, A NUMERICAL QUALITY RATING, PHOTO INTERPRETABILITY, AND A GENERAL QUALITY STATEMENT.

P	FR	CC	ATMOS	QUAL	PI
63D	1	75	MODERATE TO HEAVY	3	GOOD

TRUCKS ARE EASILY DISTINGUISHABLE FROM AUTO AND SOME VEHICLE DETAILS ARE DISCERNABLE - THE HOOD FROM THE WINDSHIELD, ETC.

P	FR	CC	ATMOS	QUAL	PI

TOP SECRET

25X1

63D 2 85 MODERATE TO HEAVY 3 GOOD

TERRAIN IS VISABLE ONLY THROUGH BREAKS IN THE CLOUD COVER. IMAGERY IS SOMEWHAT DEGRADED BY ATMOS. HIGH CONTRAST OBJECTS ARE WELL DEFINED.

P FR CC ATMOS QUAL PI

63D 3 35 MODERATE 2 GOOD

THERE IS A DISTINCT LOSS OF CONTRAST IN ASSN WITH ATMOS ATTENUATION. HOWEVER, THE IMAGE QUAL IS GOOD. AUTO SEPARATIONS ARE DISTINGUISHABLE (HOOD, FENDERS, AND TOP ETC.).

P FR CC ATMOS QUAL PI

63D 4 30 MINOR 1 EXCELLENT

THIS FR CONTAINS IMAGERY EQUAL TO THE BEST OF THE MSN.

P FR CC ATMOS QUAL PI

63D 5 25 MINOR 2 VERY GOOD

THE IMAGERY OF THIS FR IS NOT QUITE AS GOOD AS FR 4 (MATCHING FR OF STEREO PR); HOWEVER, DETAILS IN VEHICLE IMAGES ARE READILY APPARENT.

P FR CC ATMOS QUAL PI

63D 6 0 VERY LITTLE 1 EXCELLENT

THE IMAGE QUALITY OF THIS FR IS EQUAL TO THE BEST OF THE MSN. ENGINE NACELLS AND COWLING SEPARATIONS ON AIRCRAFT ARE EASILY DISCERNABLE.

P FR CC ATMOS QUAL PI

63D 7 35 MODERATE 2 GOOD

ALTHOUGH THE INFLUENCE OF ATMOS ATTEN IS VARIABLE THROUGHOUT

THE FR, DETAILS CAN BY SEEN IN MOST IMAGED VEHICLES.

P	FR	CC	ATMOS	QUAL	PI
63D	8	20	MODERATE TO HEAVY	2	FAIR TO GOOD

THE IMAGERY WITHIN THE FR IS NOT AS ACUTE AS THAT OF PREV FRS OF THE PASS. PRONOUNCED ATMOS ATTEN PRECLUDES A DEFINITE QUAL APPRAISAL OF SYSTEM PERFORMANCE.

P	FR	CC	ATMOS	QUAL	PI
63D	9	25	MINOR TO MODERATE	2	

THE OVERALL QUALITY OF THE IMAGERY IS SLIGHTLY BETTER THAN THAT OF THE PREV FR. LACK OF CULTURE PRECLUDES A DETAILED EVAL. HOWEVER, BLDG EDGES ARE SHARP AND WELL DEFINED.

P	FR	CC	ATMOS	QUAL	PI
63D	10,11,12	25			

IMAGERY IS ALL WATER - IMAGE QUALITY IS UNDETERMINED.

P	FR	CC	ATMOS	QUAL	PI
64D	1,2	100			

CC PRECLUDES A QUAL APPRAISAL.

P	FR	CC	ATMOS	QUAL	PI
64D	3	55	MODERATE	3	FAIR TO GOOD

LACK OF CULTURAL FEATURES RENDERS THIS FR POOR FOR EVAL. THE OVERALL QUALITY APPEARS TO BE CONSISTANT AND THERE IS A SUBTLE OUT-OF-FOCUS CONDITION THROUGHOUT. DEFINITE BLDG SHAPES AND TREE TYPES ARE DISCERNABLE.

P	FR	CC	ATMOS	QUAL	PI
64D	4	80	HEAVY	5	FAIR TO POOR

THIS IS THE POOREST QUAL PHOTOGRAPHY OBSERVED TO THIS POINT OF THE ANALYSIS. HEAVY CC PRECLUDES EXACT CAUSE AND EXTENT OF IMAGE DEGRADATION. IMAGE QUALITY VARIES THROUGHOUT THE FR BUT SO DOES THE HAZE LAYER. THE IMAGERY IS DEFINITELY OUT-OF-FOCUS TO SOME DEGREE.

P	FR	CC	ATMOS	QUAL	PI
64D	5	80	HEAVY	5	FAIR TO POOR

THIS IS THE SECOND HALF OF A STEREO PAIR. (MATCHES FR 4) IT IS DEFINITELY OUT-OF-FOCUS. THE QUALITY IS APPROX THE SAME AS THAT OF FR 4.

P	FR	CC	ATMOS	QUAL	PI
64D	6	80	HEAVY CLOUDS - HAZE	6	POOR

ATMOS ATTENUATION CAUSES AN UNDETERMINED AMT OF DEGRADATION. THE FR IS FURTHER DEGRADED BY AN OUT-OF-FOCUS CONDITION. THE IMAGE QUALITY OF THIS, THE POOREST FR SO FAR, IS VARIABLE AND SPOTTY. IT IS IMPOSSIBLE TO DETERMINE IF THE VARIATIONS OF QUALITY ARE CAUSED BY CHANGES IN THE DEGREE OF ATMOS ATTENUATION OR BY CHANGES IN THE AMT OF MIRROR WARPAGE.

P	FR	CC	ATMOS	QUAL	PI
64D	7	95	SEVERE	6	POOR

HEAVY CLOUDS AND HAZE CONTRIBUTE TO THE IMAGE DEGRADATION. THE IMAGE QUALITY IS ABOUT EQUAL TO THAT OF THE PREVIOUS FR. THE IMAGES, VISABLE THROUGH THE CLOUDS ARE OF CONSISTANTLY POOR QUALITY THROUGHOUT THE FORMAT. THERE IS A DEFINITE OUT-OF-FOCUS CONDITION.

P	FR	CC	ATMOS	QUAL	PI

1

64D 7 95 EXTREME 6 POOR

HEAVY CLOUDS AND HAZE FURTHER DEGRADE THIS, OUT-OF-FOCUS FR. THE IMAGERY IS CONSISTANTLY BAD IN AREAS. ONLY THE GENERAL SHAPE OF BLDGS ARE RESOLVED.

P	FR	CC	ATMOS	QUAL	PI
64D	12	Ø	VERY LITTLE	3	GOOD

IMAGE QUAL IS APPROX EQUAL THROUGHOUT THE FR. VEHICLE SHAPES, SIZES AND SEPARATIONS (HOOD, FENDERS, AND TOPS, ETC.) ARE APPARENT. FOCUS IS NOT OPTIMUM.

P	FR	CC	ATMOS	QUAL	PI
64D	13	1Ø	MODERATE	6	POOR

SEVERLY DEGRADED BY AN OUT-OF-FOCUS CONDITION. ONLY THE GENERAL SHAPES OF BLDGS ARE DISCERNABLE. THE DEGRADATION IS CONSISTANT THROUGHOUT THE FR.

P	FR	CC	ATMOS	QUAL	PI
65D	1,2	95	SEVERE	7	POOR

TERRAIN IMAGES ARE VISABLE THROUGH THE CLOUDS IN ONLY A FEW PLACES. THE DEGRADATION IS APPROX EQUAL TO THAT OF FR 13, PASS 64D.

1

P	FR	CC	ATMOS	QUAL	PI
65D	3	25	MODERATE	7	POOR

ALL IMAGES ARE SEVERELY DEGRADED. IMAGE QUAL IS APPROX EQUAL TO THE PREVIOUS FR. ONLY THE GENERAL SHAPE OF BLDGS ARE RESOLVED.

P	FR	CC	ATMOS	QUAL	PI
65D	4	4Ø	MINOR AND MODERATE	7	POOR

THE FIRST 50 PERCENT OF THE FR IS CLEAR AND IS WELL SUITED FOR ANALYSIS. ALL IMAGES ARE SEVERELY DEGRADED BY AN OUT-OF-FOCUS CONDITION. ONLY BLDG SHAPES ARE RESOLVED.

P	FR	CC	ATMOS	QUAL	PI
65D	5,6				

ALL CLOUDS AND WATER - NO EVAL

P	FR	CC	ATMOS	QUAL	PI
68D	1,2	100			

NO EVAL.

P	FR	CC	ATMOS	QUAL	PI
68D	3,4	95	HEAVY	3	FAIR TO GOOD

STEREO PR NOT WELL SUITED FOR EVALUATION; ONLY SMALL AREAS OF SHORE-LINE IMAGERY VISABLE THROUGH THE CLOUDS. THERE APPEARS TO BE A SUBSTANTIAL IMPROVEMENT IN IMAGE QUAL COMPARED TO THE LAST, SEVERAL FRS.

P	FR	CC	ATMOS	QUAL	PI
69D	1,2	0	MINOR	2	VERY GOOD

THE IMAGERY OF THESE AND ALL SUBSEQUENT FRS APPEARS TO BE NORM FOR THE SYST.

3. THE FOREGOING ANALYSIS WAS CONDUCTED ON A SUBJECTIVE BASIS. THE O NEG WAS VIEWED AT 60X ENL FACTOR. IN REALITY THE PI'S WOULD PROBABLY ANALYZE THE FILM AT LOWER MAG TO MINIMIZE THE APPARENT DEGRADATION.

T O P S E C R E T

--END OF MESSAGE--